We Claim:

1. A method of preliminarily screening peptides for immunogenicity comprising the steps of:

    1) creating a molecular model of receptor DR1 Class II MHC and minimizing the model of the DR1;

    2) modeling a peptide to be tested and minimizing the model of the peptide; and

    3) testing fit of model obtained in step 2 into the model obtained in step 1 to produce a composite receptor/peptide model.

2. A computerized model comprising a model of the DR1 molecule having fitted in a cleft therein a model of a peptide.

3. A method of claim 1 wherein, additionally, the receptor/peptide model is subjected to computer-simulated heating.

4. A method of claim 1 further comprising, assaying the peptide by competitive inhibition binding to a Class II MHC receptor DR1.

5. A minimized peptide capable of binding to a Class II MHC receptor DR1 and inhibiting the binding of HA (306-318).

6. A synthetic peptide, wherein the amino acid sequence of the minimized peptide according to claim 5 has been modified to have a superior binding affinity for a Class II MHC receptor DR1 to form at least a portion of the synthetic peptide.

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7. A synthetic peptide, wherein the amino acid sequence of the minimized peptide according to claim 5, has been modified to have greater inhibition of HA (306-318) binding to a Class II MHC receptor DR1 to form at least a portion of the synthetic peptide.

8. A synthetic peptide according to claim 6, wherein an amino acid has been modified from a charged amino acid to an uncharged amino acid.

9. A synthetic peptide according to claim 7, wherein an amino acid has been modified from a charged amino acid to an uncharged amino acid.

10. A synthetic peptide according to claim 8, wherein said uncharged amino acid is alanine.

11. A synthetic peptide according to claim 9, wherein said uncharged amino acid is alanine.

12. A minimized peptide according to claim 5, wherein the sequence is selected from the group consisting of PKYVKQNTLKLAT, AAYAAAAAAKAA and SKNGTVTWAHETNNSA, SEQ ID NO:1, SEQ ID NO:2 and SEQ ID NO: 3 respectively

13. A minimized peptide according to claim 5, wherein the sequence is contained in a CFA.

14.   A minimized peptide according to claim 13, wherein the sequence is selected from the group consisting of DEYGLGRLVNTAD, IIYQIVDEKGKKK, LNYTSGEKKISPG, WQYKSLDVNVNIE, QLYTVEMTIPAGV, TSYTFSAIYTGGE, GEYPNSGYSSGTY and GTYAGHLTVSFYS, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11 and SEQ ID NO:12 respectively.

15.   A vaccine comprising:
      a minimzed peptide according to claim 5; and an immunologically acceptable carrier.

16.   A vaccine comprising:
      a synthetic peptide according to claim 6; and an immunologically acceptable carrier.

17.   A vaccine comprising:
      a synthetic peptide according to claim 7; and an immunologically acceptable carrier.

18.   A method of eliciting an immune response in an animal comprising administering said animal with the vaccine according to claim 15.

19.   A method of eliciting an immune response in an animal comprising administering said animal with the vaccine according to claim 16.

20.   A method of eliciting an immune response in an animal comprising administering said animal with the vaccine according to claim 17.